

10        said processor being programmed to correlate the heading data of a road with a heading of the road vehicle; and

      said processor is programmed to provide a sensory indication when the vehicle is within the predefined distance from the grade crossing and when the road vehicle is on a road that intersects with the grade crossing.

*B1*  
2.        The train collision avoidance system of Claim 1, wherein said data base stores in association with said train grade crossing data, said road heading data that identifies a direction of a road with at least one of eight directions.

3.        The train collision avoidance system of Claim 2, wherein said processor is programmed to receive road vehicle heading data and compare said road vehicle heading data with the direction data stored in said data base, and if said vehicle is within the predefined distance from said grade crossing and if said vehicle direction of travel coincides with the direction data, said sensory indication is provided

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5            11.        A train collision avoidance system, comprising:

*B2*  
a first detector for detecting a geographical location of a vehicle, not a train;  
a second detector for detecting a proximity of a train near the vehicle;  
a direction sensing device for providing data indicating a heading of the vehicle;  
a data base storing geographical coordinates of grade crossings where roads intersect respective railroad tracks;

10            a processor that is programmed to compare the geographical location of the vehicle with the coordinates of the grade crossing to determine whether the vehicle is within a prescribed distance from the grade crossing; and

      said processor is programmed to provide a sensory indication when said comparison is affirmative, when said detector detects a proximity of the train near the vehicle, and when the heading of the vehicle will cause the vehicle to intersect the grade crossing.